



# Indiana Department of Environmental Management

*We Protect Hoosiers and Our Environment.*

100 N. Senate Avenue • Indianapolis, IN 46204

(800) 451-6027 • (317) 232-8603 • [www.idem.IN.gov](http://www.idem.IN.gov)

Michael R. Pence  
Governor

Carol S. Comer  
Commissioner

## WATER WORKS OPERATOR CERTIFICATION (INDIANA) CONTINUING EDUCATION TRAINING COURSE APPROVAL NOTICE

66-34

Joanne Vander Kooy

NTT

6675 S. Kenton St. Suite 100

Centennial, CO 80111

PWSG17-6003

CE Approval Number

January 4, 2017

Date Issued

Twenty-Four (24) General

Contact Hours

You are hereby notified that the Drinking Water Branch, Office of Water Quality, has approved twenty-four (24) General contact hours for the "2017 National Electric Code® NEC" to be given on various dates 2016 - 2018. The Indiana drinking water approval number should be used by all individuals seeking Indiana drinking water continuing education credits for this course. Please insure that all fields marked as "required" on the credit report, including the date(s) or the date range(s) of attendance, are generated by your organization's attendance tracking methods.

In accordance with 327 IAC 8-12-7.6 (a)(b)(c):

All training providers must maintain records that include the following: the date of the training, the names of all individuals attending the training session, length of the session, the instructor's name, the course content, and the organization sponsoring the training. These records shall be maintained for a five (5) year period following the presentation of each training session.

Training providers must submit a record of individuals attending courses within thirty (30) days of conclusion of the course on a form approved by the commissioner. These records shall be maintained for a five (5) year period. The form must contain at a minimum the following: name of course; name of individual attending course; hours of credit, and, date of course.

Any change in instructor or course presentation will require reevaluation.

Please complete the enclosed Continuing Education Credit Report Form for any Indiana drinking water operators requesting continuing education credit for this course. This form must be signed or initialed by the instructor/training provider. Submit these forms and a copy of the attendance roster to: **Indiana Department of Environmental Management, OWQ Drinking Water Branch, Mail Code 66-34 Attn: Jeremy Ferguson, 100 N. Senate Avenue, Indianapolis, Indiana 46204-2251** within thirty (30) days of completion of the approved course.



A State that Works

*[Handwritten signature]* 1/4/17

Please Reduce, Reuse, Recycle

If you wish to challenge this action, you must file a Petition for Administrative Review with the Office of Environmental Adjudication (OEA), and serve a copy of the petition upon IDEM. The requirements for filing a Petition for Administrative Review are found in IC 4-21.5-3-7 and 315 IAC 1-3-2. A summary of the requirements of these laws is provided below.

A Petition for Administrative Review must be filed with the Office of Environmental Adjudication (OEA) within fifteen (15) days of the issuance this notice (eighteen (18) days if you received this notice by U.S. Mail), and a copy must be served upon IDEM. Addresses are:

Director  
Office of Environmental Adjudication  
Indiana Government Center North  
Room 501  
100 North Senate Avenue  
Indianapolis, Indiana 46204

Commissioner  
Indiana Department of Environmental Management  
Indiana Government Center North  
Room 1301  
100 North Senate Avenue  
Indianapolis, Indiana 46204

The petition must contain the following information:

1. The name, address and telephone number of each petitioner.
2. An identification of each petitioner's interest in the subject of the petition.
3. A statement of facts demonstrating that each petitioner is:
  - a. a person to whom the order is directed;
  - b. aggrieved or adversely affected by the determination; or
  - c. entitled to administrative review under any law.
4. The reasons for the request for administrative review.
5. The particular legal issues proposed for review.
6. The facts, terms or conditions of the action for which the petitioner requests review.
7. The identity of any persons represented by the petitioner.
8. The identity of the person against whom administrative review is sought.
9. A copy of the action that is the basis of the petition.
10. A statement identifying petitioner's attorney or other representative, if any.

Failure to meet the requirements of the law with respect to a Petition for Administrative Review may result in a waiver of your right to seek administrative review. Examples are:

1. Failure to file a Petition by the applicable deadline;
2. Failure to serve a copy of the Petition upon IDEM when it is filed; or
3. Failure to include the information required by law.

If you seek to have an action stayed during the administrative review, you may need to file a Petition for a Stay of Effectiveness. The specific requirements for such a Petition can be found in 315 IAC 1-3-2 and 315 IAC 1-3-2.1.

Pursuant to IC 4-21.5-3-17, OEA will provide all parties with notice of any pre-hearing conferences, preliminary hearings, hearings, stays, or orders disposing of the review of this action. If you are entitled to notice under IC 4-21.5-3-5(b) and would like to obtain notices of any pre-hearing conferences, preliminary hearings, hearings, stays, or orders disposing of the review of this action without intervening in the proceeding you must submit a written request to OEA at the address above.

If you have procedural or scheduling questions regarding your Petition for Administrative Review you may contact the Office of Environmental Adjudication at (317) 232-0850 or see OEA's website at <http://www.in.gov/oea>.

If you have any questions, please do not hesitate to contact **Mr. Jeremy Ferguson** of my staff, at **317/234-7427**.

Sincerely,



Liz Melvin, Section Chief  
Capacity Development, Operator  
Certification, & Permits Section  
Drinking Water Branch  
Office of Water Quality

LM/JF  
Enclosure



# PUBLIC WATER SUPPLY DRINKING WATER OPERATOR CONTINUING EDUCATION CREDIT REPORT

State Form 45674 (R / 08-2005)  
Pending Approval by State Board of Accounts  
327 IAC 8-12-7.6 Edition 2003  
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
DRINKING WATER BRANCH

To ensure proper credit, the  
Indiana Drinking Water approval  
number **MUST** be submitted on the  
form.

Indiana Drinking Water Approval Number

**PWSG17-6003**

Maximum Credit Hours

**Twenty-Four (24)**

**General**

**Mail  
to:**

Indiana Department of Environmental Management  
OWQ Drinking Water Branch - Mail Code 66-34  
100 N. Senate Avenue  
Indianapolis, IN 46204-2251

## INSTRUCTIONS: To ensure proper credit, print legibly

*This form must be completed in order for the attendee to get credit. Be sure to record the certification number and class/grade for each certification for which you are requesting credit.*

*Mail the original form to IDEM at the above address. The Training Provider must retain a copy of the completed form for their records in accordance with 327 IAC 8-12-7.6.*

*Since this is a form of attendance verification, it is requested that this form be distributed during the latter portion of the training session. No credit will be considered when original signatures are not shown.*

Name of certified operator		Mailing address (number and street):	
City:	State:	ZIP code:	Work telephone number: ( )
<input type="checkbox"/> Check here if this is a change of address.			Home telephone number: ( )

Title of training course:

2017 National Electric Code® NEC

Name of organization offering the course

NTT

Number of contact hours approved for the course

Twenty-Four (24) General

## CREDIT APPLIED TO DRINKING WATER:

Operator certification number:	Class/Grade:	Expiration Date:
Operator certification number:	Class/Grade:	Expiration Date:
Operator certification number:	Class/Grade:	Expiration Date:
Operator certification number:	Class/Grade:	Expiration Date:
Operator certification number:	Class/Grade:	Expiration Date:
Operator certification number:	Class/Grade:	Expiration Date:
Operator certification number:	Class/Grade:	Expiration Date:
Operator certification number:	Class/Grade:	Expiration Date:
Date Attended: <b>(Required)</b>	Location attended:	

Number of contact hours attended and verified: **(Required)**

Signature of instructor or training provider: **(Required)**

Signature of drinking water operator: **(Required)**



**APPLICATION FOR APPROVAL OF TRAINING FOR  
CONTINUING EDUCATION - DRINKING WATER**

State Form 45675 (R2 / 4-07)  
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
DRINKING WATER BRANCH  
327 IAC 8-12-7.1(a) (b)

**Instructions**

*This application must be completed for all drinking water training courses for which continuing education credits will be given. The notice of application approval and the IDEM approval number must be obtained before continuing education contact hours are given. Any change in instructor or course presentation will require reevaluation. Providers of approved training must comply with requirements of 327 IAC 8-12-7.1 (a) and (b).*

**FOR OFFICE USE ONLY**

Indiana Drinking Water Approval Number

PL05617-6003

Maximum Credit Hours

24

Mail completed application to:  
Indiana Department of Environmental  
Management OWQ Drinking Water Branch -Mail  
Code 66-34  
100 N. Senate Avenue  
Indianapolis, IN 46204-2251

Name of training course 2017 National Electric Code® NEC	
Name of organization offering the course National Technology Transfer Inc	
Address (number and street, city, state, and ZIP code) 6675 S. Kenton St. Suite 100 Centennial CO 80111	
Course instructor(s) [indicate whether certified operator(s)] <input type="checkbox"/> Yes <input type="checkbox"/> No	Instructor Name(s) various instructors
Address (number and street, city, state, and ZIP code)	
Occupation (attach resume or biography) see attached bio's	
Name of standby instructor	Address (number and street, city, state, and ZIP code)
Number of Contact Hours for this course (a contact hour is defined as a sixty minute participation in an approved classroom program or sixty minutes of participation in an approved program not requiring classroom participation): 24	
Method of attendance monitoring and verification (be specific or attach samples) Sign in sheet	
Cost of course \$1349 less any available discounts	
Course Content: Attach an outline or narrative, brochure, agenda, workbook, etc. Include samples or description of any visual aids and handouts. Include amount of time spent on each topic. (Application cannot be evaluated without this.) see attached	
Date(s) course will be presented (month, day, year) Various dates & locations TBD	
Location(s) course will be presented various locations	
Name of Training Provider Contact Person Joanne Vander Kooy	Telephone Number 303-957-4326
Address (number and street, city, state, and ZIP code) 6675 S. Kenton St. Suite 100 Centennial CO 80111	

**Send a copy of the course approval notification letter to the following individual(s)**

Name Joanne Vander Kooy	jvanderkooy@nttinc.com
Address (number and street, city, state, and ZIP code)	
Name	
Address (number and street, city, state, and ZIP code)	

# 2017 NATIONAL ELECTRICAL CODE®

## Understanding the 2017 National Electrical Code® and NEC® Applications

The National Electrical Code® (NEC®) applies to all persons who perform electrical work. Maintenance electricians, construction electricians, instrumentation technicians, engineers, communication technicians and maintenance technicians are examples of those who must have a working knowledge of the NEC. Whether running power to a new piece of electrical equipment, setting the overloads on a motor starter, installing a security camera, or replacing fluorescent ballast; compliance with the NEC is mandatory. The Code has been adopted as law in all fifty states and NTT teaches the NEC throughout the United States and to global organizations in various international locations.

This three-day course provides an excellent introduction to the NEC along with practical navigation exercises. The 2017 NEC major changes are addressed throughout the course for those seeking Code updates. Typical field applications challenge both the novice and the experienced electrical worker. The course covers topics most needed by electrical workers including the requirements for grounding and bonding, properly sizing conductors and overcurrent protection for different applications, wiring methods, motor installation and other general equipment specifics and, special topics as requested by attendees. NTT also offers additional training on specific industry applications of the NEC

### CLASS FORMAT:

Lecture

### STANDARD CLASS SIZE:

NTT recommends a class of no more than 35 participants to obtain the best results.

### NTT TO PROVIDE:

- Three days (24 contact hours) of on-site instruction
- Textbooks
- Classroom consumables
- Completion certificates
- Shipping and instructor travel logistics

### CLIENT PROVIDES:

- Classroom of 500 square feet or greater
- Projection screen, white board and/or flip chart(s)

### WHO SHOULD ATTEND:

- Electrical contractors
- Electricians
- Maintenance electricians
- HVAC maintenance and Repair Technicians
- Plant & facility maintenance technicians
- Building engineers
- Building managers & superintendents
- Plant & facility managers
- Stationary engineers
- Energy management personnel
- Safety directors



# 2017 NATIONAL ELECTRICAL CODE®

## COURSE AGENDA

Topic Outline (description and typical information addressed):

### INTRODUCTION AND OVERVIEW

Successful Code navigation requires an overview of NEC purpose, content and layout, and how to identify changes.

*Basic requirements of Articles 90 and 110. Termination and torque requirements, working spaces and, arc flash hazard labeling.*

### GROUNDING AND BONDING

Identified by the NFPA as the most misunderstood topic in the NEC, NTT instructors remove the confusion as they explain the "why and how" of Article 250.

*Performance requirements of 250.4, sizing EGC's, GEC's and grounded conductors, installation methods, system grounding, separately derived systems, bonding requirements and, grounding of systems over 1000 volts.*

### WIRING AND PROTECTION

Branch circuits, feeders, fuses, circuit breakers are all parts of the distribution system that run from the utility service to the individual loads and all must be properly sized and installed.

*Chapter 2 in-depth information: Sizing feeders and branch circuits in facilities, overcurrent selection and sizing, surge arresters and protective devices.*

### WIRING METHODS AND MATERIALS

Installing conductors, cables and conduits properly is necessary for an electrically safe installation.

*Chapter 3 in-depth topics: Ampacity calculations, box fill, pull-box sizing, cover requirements, typically used cables and conduit installation requirements and, cable tray.*

## EQUIPMENT FOR GENERAL USE

Everyday installation and maintenance electrical work is addressed on typical equipment, such as; motors, plant lighting, HVAC equipment, panelboards to switchgear and, industrial control panels.

*Selected articles from Chapter 4, Equipment for General Use: Motors, HVAC type equipment, Industrial control panel installation, typical commercial and industrial lighting applications, and requirements for panelboards, switchboards and switchgear.*

## SPECIAL OCCUPANCIES, EQUIPMENT AND CONDITIONS AND, COMMUNICATION SYSTEMS

Based on student needs, specific industry topics are reviewed.

*Overview of typical articles include hazardous locations, temporary installations, emergency systems, fire alarm systems and some communications circuits*





Safer Workers | Stronger Companies

6675 S. Kenton Street, Suite 100|Centennial, CO 80111|800.922.2820|Fax 800.338.8441|nttinc.com

## **Course Timeline**

### **2017 National Electrical Code**

#### **3 DAY SEMINAR OUTLINE**

<b>Time</b>	<b>Subject / Break</b>
<b>Day 1</b> 8:00 – 9:30 a.m.	Begin seminar, student/instructor introduction, obtain student backgrounds.  Chapter 1, The National Electrical Code, Articles 100 & 110
9:30 – 12:00 p.m.	Chapter 2: Wiring and Protection, Articles 200-285  Chapter 3: Wiring Methods & Materials, Articles 300-324
12:00 – 12:30 p.m.	Lunch Break
12:30 – 2:30 p.m.	Complete chapter 3: Wiring Methods & Materials, Articles 326-399
2:30 – 4:30 p.m.	Chapter 4: Equipment for General Use Articles 400-490.  If time allows, quick review and QA from students.





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**Course Timeline**  
**2017 National Electrical Code**  
**Continued**

Time	Subject / Break
<b>Day 2</b> 8:00 – 9:30 a.m.	QA from students on material from previous day if any.  Chapter 5: Special Occupancies, Articles 500-530
9:30 – 12:00 p.m.	Complete Chapter 5 if not done before break. Articles 540-590
12:00 – 12:30 p.m.	Lunch break
12:30 – 2:30 p.m.	Chapter 6: Special Equipment, Articles 600-625
2:30 – 4:30 p.m.	Complete Chapter 6: Special Occupancies, Articles 626-695



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**Course Timeline**  
**2017 National Electrical Code**  
**Continued**

Time	Subject / Break
<b>Day 3</b> 8:00 – 9:30 a.m.	QA from students on material from previous day if any.  Chapter 7: Special Conditions, Articles 700-708
9:30 – 12:00 p.m.	Complete Chapter 7: Special Conditions, Articles 720-770
12:00 – 12:30 p.m.	Lunch break
12:30 – 2:30 p.m.	Chapter 8: Communication Systems, Articles 800-840
2:30 – 3:30 p.m.	Chapter 9, Tables  Complete any remaining material; Q&A
3:30 – 4:30 p.m.	NFPA 70/Arc Flash Electrical Safety – connect safety to NEC installation